REMARKS

A petition for two-month extension of time has today been filed as a separate paper and a copy is attached hereto.

The objections to the specification and drawing are respectfully traversed. While it is true, as the examiner notes, that in the embodiment of Fig. 2, spring 26 is attached to the bladder, as described in paragraph [0030] of the specification. However, claims 11 and 19 are not directed to the embodiment of Fig. 2. Rather, claims 11 and 19 are directed to the embodiment of Fig. 3 which shows spring 38 surrounding and external to the shut-off valve. *See* the discussion in paragraph [0031] of applicant's specification.

The examiner will note that claim 1 has been amended to incorporate the limitation of claim 6, now cancelled. Accordingly, claim 1 represents claim 6 rewritten in independent form and the rejection for anticipation by Mercier, as applied to claim 6, is respectfully traversed. The examiner's rejection is predicated on the assumption that Mylar, which may be used to form the bladder 27 of Mercier (column 2, lines 32-36 of Mercier), "is known to be a material of a thin metal layer attached to a plastic film," quoting from page 3 of the office action. It is respectfully submitted that the examiner is incorrect in this respect. The Mercier patent teaches that "Mylar" is a trade name for a type of polyurethane marketed by Dupont.

On the other hand, the chemical literature defines "Mylar" as a trademark for a

"polyester film." *See* the attached definitions from *Hawley's Condensed Chemical Dictionary* (Attachment No. 1), Dupont registration numbers 559948 (Attachment No. 2), 625875 (Attachment No. 3), 616473 (Attachment No. 4), and 616652 (Attachment No. 5). Thus, while "Mylar" was originally developed by Dupont to serve as a substrate to support a thin metal reflective layer, i.e., the balloon of the Echo Satellite launched in 1960 (*see* Attachment No. 6), Mylar, per se, is not a metal film.

The rejection of claims 1, 3, 5-8, 12, 17 and 25 for obviousness over Drumm in view of Weber and Taylor is also traversed. At page 5 of the most recent office action, the examiner writes:

> "It would have been obvious to one skilled in the art to modify the accumulator in Drumm by providing a second port and valve for the control of the amount of gas in the system as such would allow for more control over the function of the accumulator and make it better to accommodate different situations and a wider range of uses as suggested by Weber . . ."

The devices of Drumm and Weber are simply pressure accumulators wherein liquid enters and exits a single chamber through a single port . On the other hand, Taylor (Webb) is not intended to function as a pressure accumulator. Rather, Taylor is directed toward a storage tank for "extremely reactive chemicals" (column 2, line 2), especially rocket propellant (column 2, lines 24-29). Toward this end, Taylor provides a conduit 25 for delivery and supply of the stored liquid to and from the tank, i.e., to and from the interior of the bladder (column 3, lines 17-37), a conduit 27 to allow for escape of air from the bladder as it is filled with liquid (column 3, lines 28-32) and a conduit 16 for supply of "pressure" for the purpose of expelling the liquid contained within the bladder (column 3, lines 14-17 and 24-26). Thus, while all of Drumm, Weber and Taylor supply pressure to the exterior of a bellows (Drumm and Weber) or a bladder (Taylor), Drumm and Weber do so for a purpose unrelated to the purpose of Taylor.The purpose of Taylor is discharge from storage within a tank of a reactive chemical, especially rocket propellant. The only purpose suggested by Taylor for provision of a port or ports in communication with the interior of bladder 20 is storage and supply of the reactive chemical or propellant. Neither Drumm nor Weber supplies liquid from one chamber responsive to supply of pressure to a second chamber. In Drumm and Weber the single chamber within the interior of the bellows stores nothing that can be received and discharged in the manner of Taylor. To modify Drumm to allow for receipt and discharge of a liquid as in Taylor, would change the operative principle of Drumm. "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facia* obvious" quoting from MPEP 2143.01

and citing In re Ratti, 123 U.S.P.Q. 349 (CCPA 1959).

At page 5 of the Office Action, the Examiner states that the motivation would be to "allow or promote control over the function of the accumulator."

In both Drumm and Weber a bellows expands and contracts linearly along the same axis on which a valve member, controlled by the bellows, reciprocates. In other words, in both Drumm and Weber the bellows is designed to operate a valve, i.e. element 7 in Drumm and element 2 in Weber. In contrast, in Taylor (Webb) expansion and contraction of the bladder is not coaxial with any valve member and, moreover, is not linear or coaxial with any inlet or outlet fixture. There is no suggestion in any reference of record that a bladder would be a desirable replacement for the bellows of Drumm or even a practical replacement for the bellows of Drumm.

At page 6 of the Office Action the Examiner writes:

> "It would have been obvious to one skilled in the art to modify the bladder in Drumm to be formed as a non-bellows bag provided with a metal and plastic layer as such as a known equivalent type of bladder used in accumulators as suggested by Taylor where such would provide for cheaper and simpler bladder to that of the accordion pleated metal only bladder of Drumm."

Firstly, as is noted above, the storage tank of Taylor is not an accumulator in the sense that Taylor and Weber are accumulators. In both Drumm and Weber, pressure is introduced and withdrawn against a fluid within a closed space so that it is pressure which is accumulated. Again, Taylor is directed toward a storage tank and is not intended to provide the pressure accumulating function of Drumm or Weber. Thus, for the Examiner to characterize the bladder of Taylor as "a known equivalent type of bladder used in accumulators" is unsupported by the objective evidence of record. Likewise, there is no objective evidence of record to the effect that motivation would be

found in provision of "a cheaper and simpler bladder." The motivation for combining references "must be based on objective evidence of record," quoting from In re Lee, 61 U.S.P.Q 2d 1430, at 1433 (Fed. Cir. 2002).

At page 11 of the Office Action the Examiner writes:

> "Taylor teaches that metal bags can be non-pleated in accumulator structures, and Taylor sets forth the use of such for diaphragms in pressure responsive systems which is what the bag in Drumm is the equivalent of."

As noted above, Taylor is not intended to serve as a pressure accumulator. The Examiner's fashioning of a generic term, i.e. "pressure responsive systems," as allegedly descriptive of both Taylor and Drumm, is not a factual basis supporting the premise that the prior art suggests the desirability of substitution of the bladder of Taylor for the non-equivalent bellows of Drumm.

The rejection of claim 3 over Mercier in view of Weber is respectfully traversed in view of the fact that claim 3 depends from claim 1 and further in view of the fact that claim 1 defines the bladder as formed of a metal foil, a structure which is not suggested by the combined teachings of Mercier and Weber.

The rejection of claims 14, 16, and 18 for obviousness over Drumm in view of Weber, Taylor and Miller is respectfully traversed for the reasons that Taylor is not properly combinable with Drumm and Weber, as explained above.

Regarding the thickness of the metal foil recited by amended claim 14, (see cancelled claim 10) the Examiner writes:

> "The use of any thickness of metal is considered an obvious choic of mechanical expedients where one skilled in the art would only need routine experimentation to arrive at optimum values....".

Whatever merit such argument may have had at one time, the current case law rejects the notion that allegations of obvious "design choice" and/or "routine experimentation" are sufficient basis for establishing a *prima facia* case for obviousness. See, for example, In re Yates, 211 U.S.P.Q. 1149 (CCPA 1981) and Ex parte Peterson, 228 U.S.P.Q. 216 (Bd. Pat. App. & Int. 1985). Moreover, the Examiner's argument ignores Applicants' teaching of the importance of the thickness of the metal foil in the context of their invention. See paragraph [0018] at page 6 of Applicants' specification.

The rejection of claims 14, 16, 18 and 26 for obviousness over Mercier in view of Miller is respectfully traversed because Mercier modified to include the vent of Miller would still lack a bladder formed of a metal foil as required by these claims as amended.

The rejection of claim 21 for obviousness over Mercier in view of Hafner and the rejection of claim 23 for Mercier in view of Miller are respectfully traversed for the reason that the hypothetically modified structure of Mercier would still lack the bladder formed of a metal foil as recited by these claims.

In conclusion, it is respectfully requested that the Examiner reconsider the rejections of record with a view toward allowance of the claims as amended.

Respectfully submitted,

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Date: December 5, 2005

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